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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,607	03/09/2004	Jao-Ching Lin	12451/4	1776

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EXAMINER

DHARIA, PRABODH M

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/796,607	Applicant(s) LIN ET AL.	
	Examiner Prabodh M. Dharja	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133)..
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. **Status:** Please address all the replies and correspondence to the new examiner art unit 2629. Receipt is acknowledged of papers submitted on 03-09-2004 under a new application, which have been placed of record in the file. Claims 1-30 are pending in this action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-9,14,16-24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zadeski et al. (US 2005/0052425 A1) in view of Kato Sunji (JP 2003-015808, US equivalent is US 7,088,340 B2).

Regarding Claim 1, Zadeski et al. teaches a handheld electronic device (page 8, paragraph 77, Line 1, see Fig. 13) comprising: a case body (page 8, paragraph 78, Line 2); a touch control input module mounted on said case body (page 9, paragraph 83, Line 1) and including a protective layer having an outer surface exposed from said case body,

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(page 4, paragraph 45) and an inner surface opposite to said outer surface, said outer surface being defined with a plurality of contact regions (page 4, paragraph 45), each of said contact regions being indicated with a symbol (page 9, paragraph 82, Lines 1-3, see figure 13), a sensing layer in contact with said inner surface of said protective layer, said sensing layer being responsive to contact of an object with said outer surface of said protective layer (page 4, paragraph 45) so as to generate an electrical output indicative of contact position of the object with said outer surface of said protective layer (page 4, paragraph 45, 48-50), and a signal processing unit coupled electrically to said sensing layer for receiving the electrical output (page 5, paragraph 51) and for generating a control output corresponding to the electrical output (page 5, paragraph 51 Lines 8-13); and a processing device disposed in said case body, coupled electrically to said signal processing unit (page 5, paragraph 51, Line 3), and responsive to the control output from said signal processing unit so as to perform an operation associated with the control output (page 5, Paragraph 54).

However, Zadeski et al. fails to recite or disclose contact regions area marked with symbols.

However, Kato Sunji teaches the touch pad regions are marked with (page 1, abstract, page 2 of 46 paragraph 8, teaches each of the key top are marked, and each key-top represents different region in the touch pad of PDA, pages 7, 8 of 46 of detailed description paragraphs 42-48, US equivalent Col. 46, Line 11-42).

The reason to combine is to be able to have an user friendly input device with hand writing mode and each region is identified by different symbols.

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Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Kato Sunji in the teaching of Zadeski et al. to be able to have an user friendly touch pad input device with hand writing input mode and each region is identified by different symbols.

Regarding Claim 2, Zadeski et al. teaches signal processing unit includes a coordinate computing unit coupled electrically to said sensing layer for receiving the electrical output and for generating a coordinate output corresponding to the electrical output (page 5, paragraph 51), and an encoder coupled electrically to said coordinate computing unit for receiving the coordinate output (page 4, paragraph 47-49) and for generating the control output that corresponds to the coordinate output (page 4, paragraphs 49,50, Page5, paragraphs 50,51) and that is provided to said processing device (page 5, paragraph 51).

Regarding Claim 3, Zadeski et al. teaches encoder is operable in a selected one of a key input mode, where the control output generated by said encoder corresponds to the symbol marked on said contact region that is associated with the coordinate output from said coordinate computing unit, where the control output generated by said encoder corresponds to movement of the object on said outer surface of said protective layer (pages 4,5, paragraphs 45-51).

Kato Sunji teaches a handwriting input mode (page 1, abstract, page 2 of 46 paragraph 8, teaches each of the key top are marked, and each key-top represents different region in the touch pad of PDA, pages 7, 8 of 46 of detailed description

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paragraphs 42-48, also teaches hand writing, US equivalent Col. 7, Lines 64,65, Col. 8, Lines 49-51,57-62).

Regarding Claim 4, Zadeski et al. teaches signal processing unit further includes a mode control unit associated operably with said encoder for enabling operation of said encoder (page 4, paragraph 45-49) and Kato Sunji teaches in the selected one of the key input mode and the handwriting input mode (Col. 8, Lines 14-51 it is obvious the several different key input mode and hand writing mode to be recognized they are encoded to determine key input or hand writing input.).

Regarding Claim 5, Zadeski et al. teaches the symbols marked on said contact regions of said outer surface of said protective layer are distinct from each other. (page 9, paragraph 82, Lines 1-3, see figure 13),

Regarding Claim 6, Zadeski et al. teaches outer surface of said protective layer is configured with a block that contains at least an adjacent pair of said contact regions, and the control output generated by said encoder corresponds to said block when successive ones of the coordinate outputs from said coordinate computing unit within a predetermined time period indicate movement of the object from one of said contact regions in said adjacent pair to the other of said contact regions in said adjacent pair (page 4, paragraphs 45-48).

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Regarding Claim 7, Zadeski et al. teaches outer surface of said protective layer is configured with a block that contains one of said contact regions, and the control output generated by said encoder corresponds to said block when successive ones of the coordinate outputs from said coordinate computing unit within a predetermined time period indicate movement of the object along a length of said one of said contact regions contained in said block (page 4, paragraphs 45-48, page 8, paragraph 73, page 9, paragraph 82, Lines 1-4).

Regarding Claim 8, Zadeski et al. teaches outer surface of said protective layer is a flat surface (page 4, paragraph 45).

Regarding Claim 9, Zadeski et al. teaches outer surface of said protective layer is a curved surface. (page 3, paragraph 43).

Regarding Claim 14, Zadeski et al. teaches the symbols of said contact regions project from said outer surface of said protective layer (page 4, paragraph 45).

Regarding Claim 16, Zadeski et al. teaches a touch control input module mounted on said case body (page 9, paragraph 83, Line 1) and including a protective layer having an outer surface exposed from said case body, (page 4, paragraph 45) and an inner surface opposite to said outer surface, said outer surface being defined with a plurality of contact regions (page 4, paragraph 45), each of said contact regions being indicated with a symbol (page 9, paragraph 82, Lines 1-3, see figure 13), a sensing layer in contact with

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said inner surface of said protective layer, said sensing layer being responsive to contact of an object with said outer surface of said protective layer (page 4, paragraph 45) so as to generate an electrical output indicative of contact position of the object with said outer surface of said protective layer (page 4, paragraph 45, 48-50), and a signal processing unit coupled electrically to said sensing layer for receiving the electrical output (page 5, paragraph 51) and for generating a control output corresponding to the electrical output (page 5, paragraph 51 Lines 8-13); and a processing device disposed in said case body, coupled electrically to said signal processing unit (page 5, paragraph 51, Line 3), and responsive to the control output from said signal processing unit so as to perform an operation associated with the control output (page 5, Paragraph 54).

However, Zadeski et al. fails to recite or disclose contact regions area marked with symbols.

However, Kato Sunji teaches the touch pad regions are marked with (page 1, abstract, page 2 of 46 paragraph 8, teaches each of the key top are marked, and each key-top represents different region in the touch pad of PDA, pages 7, 8 of 46 of detailed description paragraphs 42-48, US equivalent Col. 46, Line 11-42).

The reason to combine is to be able to have an user friendly input device with hand writing mode and each region is identified by different symbols.

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Kato Sunji in the teaching of Zadeski et al. to be able to have an user friendly touch pad input device with hand writing input mode and each region is identified by different symbols.

Regarding Claim 17, Zadeski et al. teaches signal processing unit includes a coordinate computing unit coupled electrically to said sensing layer for receiving the electrical output and for generating a coordinate output corresponding to the electrical output (page 5, paragraph 51), and an encoder coupled electrically to said coordinate computing unit for receiving the coordinate output (page 4, paragraph 47-49) and for generating the control output that corresponds to the coordinate output (page 4, paragraphs 49,50, Page5, paragraphs 50,51) and that is provided to said processing device (page 5, paragraph 51).

Regarding Claim 18, Zadeski et al. teaches encoder is operable in a selected one of a key input mode, where the control output generated by said encoder corresponds to the symbol marked on said contact region that is associated with the coordinate output from said coordinate computing unit, where the control output generated by said encoder corresponds to movement of the object on said outer surface of said protective layer (pages 4,5, paragraphs 45-51).

Kato Sunji teaches a handwriting input mode (page 1, abstract, page 2 of 46 paragraph 8, teaches each of the key top are marked, and each key-top represents different region in the touch pad of PDA, pages 7, 8 of 46 of detailed description paragraphs 42-48, also teaches hand writing, US equivalent Col. 7, Lines 64,65, Col. 8, Lines 49-51,57-62).

Regarding Claim 19, Zadeski et al. teaches signal processing unit further includes a mode control unit associated operably with said encoder for enabling operation of said

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encoder (page 4, paragraph 45-49) and Kato Sunji teaches in the selected one of the key input mode and the handwriting input mode (Col. 8, Lines 14-51 it is obvious the several different key input mode and hand writing mode to be recognized they are encoded to determine key input or hand writing input.).

Regarding Claim 20, Zadeski et al. teaches the symbols marked on said contact regions of said outer surface of said protective layer are distinct from each other. (page 9, paragraph 82, Lines 1-3, see figure 13).

Regarding Claim 21, Zadeski et al. teaches outer surface of said protective layer is configured with a block that contains at least an adjacent pair of said contact regions, and the control output generated by said encoder corresponds to said block when successive ones of the coordinate outputs from said coordinate computing unit within a predetermined time period indicate movement of the object from one of said contact regions in said adjacent pair to the other of said contact regions in said adjacent pair (page 4, paragraphs 45-48).

Regarding Claim 22, Zadeski et al. teaches outer surface of said protective layer is configured with a block that contains one of said contact regions, and the control output generated by said encoder corresponds to said block when successive ones of the coordinate outputs from said coordinate computing unit within a predetermined time period indicate movement of the object along a length of said one of said contact regions

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contained in said block (page 4, paragraphs 45-48, page 8, paragraph 73, page 9, paragraph 82, Lines 1-4).

Regarding Claim 23, Zadeski et al. teaches outer surface of said protective layer is a flat surface (page 4, paragraph 45).

Regarding Claim 24, Zadeski et al. teaches outer surface of said protective layer is a curved surface. (page 3, paragraph 43).

Regarding Claim 29, Zadeski et al. teaches the symbols of said contact regions project from said outer surface of said protective layer (page 4, paragraph 45).

5. Claim 10-13 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zadeski et al. (US 2005/0052425 A1) in view of Kato Sunji (US 7,088,340 B2) as applied to claims 1-9, 14, 16-24 and 29 above, and further in view of Fuwaua et al. (US 2002/0176245 A1).

Regarding Claim 10, Zadeski et al. modified by Kato Shunji fails to teach the symbols are printed on said contact regions using one of lithographic, relief and intaglio printing techniques.

However, Fuwaua et al. teaches the symbols are printed on said contact regions using one of lithographic, relief and intaglio printing techniques (page 2, paragraph 25, page 4,

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paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

The reason to combine is to be able to have an user friendly input device that used during any time of the day.

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Fuwaua et al. in the teaching of Zadeski et al. modified by Kato Shunji to be able to have an user friendly touch pad input device that illuminates in the dark.

Regarding Claim 11, Fuwaua et al. teaches the symbols are printed on said contact regions using a paint material that contains one of a phosphorescent material and a fluorescent material (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

Regarding Claim 12, Fuwaua et al. teaches contact regions are defined on said outer surface of said protective layer by printing using one of lithographic, relief and intaglio printing techniques (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

Regarding Claim 13, Fuwaua et al. teaches contact regions are defined on said outer surface of said protective layer by printing using a paint material that contains one

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of a phosphorescent material and a fluorescent material (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

Regarding Claim 25, Zadeski et al. modified by Kato Shunji fails to teach the symbols are printed on said contact regions using one of lithographic, relief and intaglio printing techniques.

However, Fuwasa et al. teaches the symbols are printed on said contact regions using one of lithographic, relief and intaglio printing techniques (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

The reason to combine is to be able to have an user friendly input device that used during any time of the day.

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Fuwasa et al. in the teaching of Zadeski et al. modified by Kato Shunji to be able to have an user friendly touch pad input device that illuminates in the dark.

Regarding Claim 26, Fuwasa et al. teaches the symbols are printed on said contact regions using a paint material that contains one of a phosphorescent material and a fluorescent material (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's

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with special ink would require lithographic printing).

Regarding Claim 27, Fuwasa et al. teaches contact regions are defined on said outer surface of said protective layer by printing using one of lithographic, relief and intaglio printing techniques (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

Regarding Claim 28, Fuwasa et al. teaches contact regions are defined on said outer surface of said protective layer by printing using a paint material that contains one of a phosphorescent material and a fluorescent material (page 2, paragraph 25, page 4, paragraph 72, page 6, paragraph 98 it is obvious to one ordinary skill in the art to print these symbols or logos or indicia's with special ink would require lithographic printing).

6. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zadeski et al. (US 2005/0052425 A1) in view of Kato Sunji (US 7,088,340 B2) as applied to claims 1-9, 14, 16-24 and 29 above, and further in view of Hinckley et al. (US 2006/0028455 A1).

Regarding Claim 15, Zadeski et al. teaches the symbols of said contact regions project from said outer surface of said protective layer (page 4, paragraph 45).

However, Zadeski et al. modified by Kato Shunji fails to teach the symbols of said contact regions are engraved in said outer surface of said protective layer.

However, Hinckley et al. teaches the symbols of said contact regions are engraved (page 1, paragraph 9, page 4, paragraph 50, page 6, paragraph 62).

The reason to combine is to be able to have an user friendly input device with touch pad engraved with symbol, indicia or other key functions
Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Hinckley et al. in the teaching of Zadeski et al. modified by Kato Shunji to be able to have an user friendly touch pad input device with engraving symbol, indicia or key functions.

Regarding Claim 30, Zadeski et al. teaches the symbols of said contact regions project from said outer surface of said protective layer (page 4, paragraph 45).

However, Zadeski et al. modified by Kato Shunji fails to teach the symbols of said contact regions are engraved in said outer surface of said protective layer.
However, Hinckley et al. teaches the symbols of said contact regions are engraved (page 1, paragraph 9, page 4, paragraph 50, page 6, paragraph 62).

The reason to combine is to be able to have an user friendly input device with touch pad engraved with symbol, indicia or other key functions

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Hinckley et al. in the teaching of Zadeski et al. modified by Kato Shunji to be able to have an user friendly touch pad input device with engraving symbol, indicia or key functions.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moriya; Netzer et al. (US 6727891 B2) Input device for personal digital assistants.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

9. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

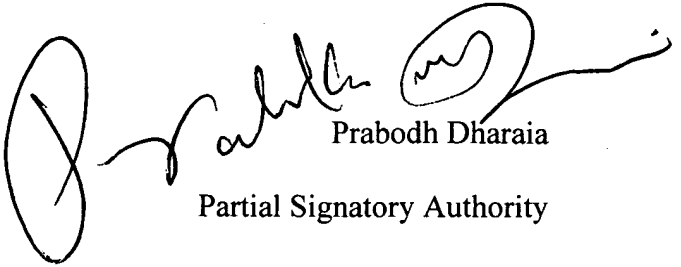
10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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A handwritten signature in black ink, appearing to read 'Prabodh Dharaia', is written over the printed name. The signature is fluid and cursive, with a large loop at the beginning and a long, sweeping tail.

Prabodh Dharaia

Partial Signatory Authority

AU 2629

December 22, 2006